S. HRG. 101-1048

NOMINATIONS—NOAA AND MARINE MAMMAL COMMISSION

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

SYLVIA A. EARLE, TO BE CHIEF SCIENTIST, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND PAUL K. DAYTON, TO BE A MEMBER, MARINE MAMMAL COMMISSION

OCTOBER 11, 1990

Printed for the use of the
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NOMINATIONS—NOAA AND MARINE MAMMAL COMMISSION

THURSDAY, OCTOBER 11, 1990

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 9:05 a.m. in room SR-253, Russell Senate Office Building, Hon. Albert Gore, Jr. presiding.

Staff members assigned to this hearing: Mike Nussman; Penny Dalton; and Becky Kojm, professional staff members; and Ruth Johnson, minority professional staff member.

OPENING STATEMENT BY SENATOR GORE

Senator GORE. The hearing will come to order.

Today the Committee on Commerce, Science, and Transportation is considering two nominations which have been submitted to the Senate by the President. The first is Dr. Sylvia Alice Earle to be Chief Scientist of the National Oceanic and Atmospheric Administration, and the second is Dr. Paul K. Dayton to be a Commissioner on the Marine Mammal Commission.

The Chief Scientist of NOAA is the principal scientific adviser to the Under Secretary for Oceans and Atmosphere in the Department of Commerce, the responsibilities include serving as NOAA's principal spokesperson on scientific issues, formulating and recommending scientific policy, and providing guidance to NOAA managers on technological matters.

I am very pleased to welcome Dr. Earle this morning as the nominee for the important position of Chief Scientist. Dr. Earle is a resident of Oakland, California. She received her bachelor's degree from Florida State University and her master's and Ph.D. from Duke University.

Since 1981 Dr. Earle has served as founder, director, and chief executive officer of Deep Ocean Technology in San Leandro, California. Prior to this, she served on the board of directors for Undersea Industries from 1978 to 1981 and as Corporate Secretary-Treasurer of Sea Films, Incorporated and Ocean Films, Incorporated of Berkeley, California from 1976 to 1978. In addition, Dr. Earle was co-founder and Secretary-Treasurer of Aquaculture International from 1967 to 1970.

She has also served as fellow, research biologist, and curator at the California Academy of Sciences since 1979; as research associ-

ate at the University of California at Berkeley, and as research fellow at Harvard University since 1967.

I am pleased personally that the President has nominated such a qualified individual to this position, and at this point I would like to recognize Dr. Earle for an opening statement.

I have a statement that Senator Wilson would like to have included in the record.

[The biographical sketch follows:]

United States Senate

COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION

WASHINGTON, DC 20510-6125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: Earle (Last) Sylvia (First) Alice (Other)

Address: 12812 Skyline Blvd. (Current residence) Oakland, California 94619

1431 Doolittle Drive (Business) San Leandro, California 94577

2. Position to which nominated: Chief Scientist, NOAA

Date of nomination: May, 1990

3. Date of birth: August (month) 30 (day) 1935 (year)

Place of birth: Gibbstown, New Jersey

4. Marital status: Married

Full name of Spouse: Graham S. Hawkes

5. Names and ages of children: Elizabeth Richie Mead Miller 29

John Richie Mead 27

Gale Graf Mead 21

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
Clearwater High School, Clearwater, FL	1950 - 52	HS Diploma	1952
St. Petersburg Jr. College	1952 - 53	A. A.	1953
Florida State University, Tallahassee, FL	1953 - 55	B. S.	1955
University of Virginia	1955 (summer)	-	-
Duke University, Durham, NC	1955 - 56	M. A.	1956
University of Florida, Gainesville, FL	1960 - 62	-	-
Duke University, Durham, NC	1964 - 66	Ph. D	1966

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
1982	Present	Deep Ocean Engineering,Inc.	1431 Doolittle Dr.	Administrative/ Scientific/Technical
1981	Present	Deep Ocean Technology, Inc.	1431 Doolitte Dr.	Administrative/ Scientific/Technical
1984	1988	California Academy of Sciences	San Francisco,CA	Hon. Curator of Phycology
1976	1984	California Academy of Sciences	San Francisco,CA	Curator of Phycology Research Biologist
1967	1984	Farlow Herbarium,Harvard Univ.	Cambridge, Mass.	Hon. Research Assoc.
1976	1981	Self Employed	12812 Skyline Blvd. Oakland,CA.	Derived income as consultant, author, lecturer including projects for the National Geographic, British Broadcasting Co., Survival Anglia, and others.

PLEASE SEE ATTACHED SHEET FOR ADDTIONAL INFORMATION

8. Government experience: List any experience in or direct association with federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions. 2a

U. S. Government:	1957	Served as fisheries biologist for Fish and Wildlife Service
	1980-1984	Served as member of Presidential Advisory Commission, National Advisory Committee on Oceans and Atmosphere
	1990	Serving as member of Environmental Protection Agency's National Advisory Committee on Environmental Technology Policy
Los Angeles County	1972-75	Los Angeles County Beach Commission (Honorary)
	1970-76	Research Botanist, LA Co. Museum Nat. History (Honorary)
State of Louisiana	1966	Summer Instructor, Tulane University
State of Florida	1963-64	St. Petersburg Jr. College Research Asst.
	1953-55	Florida State University - Research Asst.
	1959-60	University of Florida - Research Asst.
State of California	1971-76	University of California at Los Angeles - Extension Instructo
	1969-81	University of California at Berkeley -Research Assoc.-Honorar

9. Political affiliations acuvities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

From time to time during the past 20 years I have made $100.00 contributions to the Republican Party.

I have on two occasions contributed to the re-election committee for Senator Lowell Weicker, I believe in 1988 and 1984 ($500 each)

2a

7. Employment Record

From - To	Name and Address of Employer; Type of Work
1984 - 1985	Boeing Engineering, Seattle, Wash. Consultant for Project Aspen
1981 - 1986	WED Industries; Disney-Epcot, Orlando, FL Advisory Board, Living Seas Pavilion (Honorary)
1978 - 1981	Undersea Industries, a Division of S. C. Johnson Co. (Johnson Wax). Served as Outside Director
1969 - 1982	University of California, Berkeley Research Associate in Botany for research on marine plants.
1976 - 1978	Sea Films, Inc. and Ocean Films, Inc. Corporate Sec.-Treas. and consultant for production of documentary films.
1967 - 1976	Mead Ranch, Napa, California Principal involved with part time management and operation of 50 acre vineyard and 1300 acre ranch including overseeing harvesting, maintaining books and records, managing employees, arranging sales to wineries (California Cooperative;Inglenook;Souverain)
1967 - 1970	Aquaculture International. Delaware Corp. Co-Founder and Sec.-Treas.; explored feasibility of various aquaculture projects.
1971 - 1979	University of California Extension Program Los Angeles, CA Instructor for several courses on Marine Ecology, Marine Mammals, Aquaculture, China, Underwater Research.
1970 - 1976	Los Angeles County Museum of Natural History Los Angles, CA Research on marine plants.
1967 - 1969	Radcliffe Institute, Radcliffe College Research on marine plants.
1971	Smithsonian Tropical Research Institute, Panama Consultant; research on marine plants

2b

1967 - 1981	Harvard University, Cambridge, Mass. Research Fellow or Associate for study of marine plants.
1967 - 1968	Mote Marine Laboratory, Sarasota, FL Research Associate
1965 - 1967	Cape Haze Marine Laboratory (Now Mote Marine Laboratory), Sarasota, FL Resident Director and Research Associate for marine research.
1966	Tulane University, New Orleans, LA Summer instructor, Environmental Biology
1966	Mote Scientific Foundation, New Orleans, LA Consultant
1963 - 1964	St. Petersburg Jr. College, St. Petersburg, Florida. Instructor in Zoology
1960 - 1963	Self-employed; Gainesville, FL Research on marine plants in Gulf of Mexico and scientific illustrating
1959 - 1960	University of Florida, Gainseville, FL Herbarium Assistant
1957 - 1959	Self-employed; conducted botanical research/photography while resident in Florida Everglades National Park, Great Smoky Mountains National Park, Hatteras National Seashore.
1957	U. S. Fish and Wildlife Serv.; Beaufort, NC Research on marine invertebrates
1956 - 1957	Duke University, Botany Dept., Durham, NC Herbarium Assistant
1953 - 1956	Florida State University, Botany Dept. Tallahassee, FL Herbarium assistant and various teaching and research assistantships in botany, plant ecology, and salt marsh research.
1952 - 1953	St. Petersburg Jr. College St. Petersburg, FL; Teaching assistant
1952 - 1957	Self-employed as scientific illustrator

STATEMENT OF DR. SYLVIA A. EARLE

Dr. EARLE. Thank you. Mr. Chairman, I am honored to be nominated by the President as Chief Scientist of NOAA, and I would like to thank Secretary Mosbacher for recommending me to President Bush. I have admired, respected, and worked from time to time with NOAA as an independent scientist since NOAA began 20 years ago this month. In fact, I was witness to the creation of NOAA under curious, although appropriate, circumstances.

I was under water at the time. In July 1970 I was the leader of a team of aquanauts during the Tektite Project, an experiment in living, working, and conducting research from an underwater laboratory that was then hailed as an underwater equivalent to Skylab. It was organized under the auspices of the Department of the Interior. My team submerged on July 6, and when we emerged 2 weeks later we were advised that the program supervision would shift to a new agency. On July 9, 1970, President Nixon had recommended the formation of NOAA and its establishment as a part of the Department of Commerce.

Mr. Chairman, I am aware that NOAA now encompasses a broad range of national responsibilities concerning the oceans and atmosphere. It embraces matters ranging from basic research involving laboratory ships and field stations, documenting and reporting the weather, overseeing marine fisheries, and much more. It would be presumptuous to suggest that I or perhaps any other one scientist had sufficient expertise or experience to represent fully the Nation's science in all of these vital matters. I believe, however, that if confirmed as Chief Scientist I will bring some especially useful knowledge and experience to the office.

My formal training includes a bachelor's degree from Florida State University, an M.A. and Ph.D. from Duke University, with additional graduate work at the University of Virginia and the University of Florida. My principal research interests then and now concern plant life, fish, and invertebrates in the ocean, with special focus on ecosystems, deep water plants, and the role of natural ecosystems in global processes. I have also conducted research on the behavior of marine mammals and have, for more then ten years, been involved with the design, development, and use of new equipment for gaining effective access to the sea.

My work as a marine scientist has involved leading and participating in more than 50 research expeditions, including in excess of two years aboard vessels at sea and more than 5000 hours underwater using standard diving techniques and some distinctly unconventional approaches. I have lived underwater in research laboratories on six occasions and in 1979 set a record for untethered solo diving using the ADS JIM during a research dive in Hawaii. I also made a record solo dive to 3000 feet in the one-man sub, Deep Rover, during a research program near San Diego in 1985. These research interests are reflected in the 70 publications that I have authored and they have been represented in more than 30 films for television with which I have been associated. I have also given approximately 1000 lectures in more than 30 countries to technical and general audiences.

Early in my career I served as Resident Director of the Cape Haze Marine Laboratory, and thereafter for four years was a Research Fellow at Harvard University and, for two years, was concurrently a Research Scholar at the Radcliffe Institute. Later, for five years, I was Research Associate at the Natural History Museum in Los Angeles, where I am now a Fellow, and since then have been associated with the California Academy of Sciences in San Francisco, where I am also a Fellow.

I belong to a number of professional scientific and technical organizations and have served on the Corporation of Woods Hole Oceanographic Institution and on the Advisory Boards of Lamont Geological Observatory and the University of Rhode Island's Graduate School of Oceanography. For four years, 1980–1984, I was a member of the National Advisory Committee on Oceans and Atmosphere, chaired by Dr. John Knauss, now Administrator of NOAA.

Years ago I became impressed with the rapid and largely destructive changes occurring in pristine coastal environments that I had known as a child. Concern about such changes relative to the future of mankind and to the planet as a whole led to my involvement with various conservation efforts. As a result, I have served and continue to serve with the World Wildlife Fund in various roles as a trustee and currently as a councilmember of the U.S. organization as well as internationally. I also serve on the board of the Charles A. Lindbergh Fund and the Explorers Club.

As a scientist, conservationist and ocean explorer, I have become increasingly aware of the problems relating to ocean access. In an effort to help develop new technology that would accelerate effective access to the sea, I became a businesswoman and co-founded Deep Ocean Technology and Deep Ocean Engineering some years ago, and I presently do serve as the director, President and Chief Executive Officer of both of these corporations.

Few marine scientists have had the opportunities I have had for global field experience combined with global environmental policy. Fewer still have had the pleasure of starting and sustaining a successful business.

Mr. Chairman, I believe that this is a pivotal time in history when individual actions can and will have a magnified impact on the future either through conscious action or by default through inaction. If confirmed as Chief Scientist, I believe I could make a positive contribution by working with NOAA personnel and with the scientific community generally to help develop and implement national policies to protect and effectively manage oceanic and atmospheric concerns.

After 20 years, NOAA has grown into an extremely important, highly respected and increasingly active organization. It would be an honor to become a part of this organization. I hope that I shall have the opportunity to do so.

Thank you.

Senator GORE. Thank you very much, Dr. Earle.

You have been involved in science for over 30 years. With your background, what would you identify as the most important scientific challenge facing NOAA in the upcoming months and in the coming decade?

Dr. EARLE. If confirmed as Chief Scientist, I will explore with the NOAA staff and scientists ideas to address the global issues that face NOAA. I think NOAA's primary challenge is the fact that oceans and atmosphere are not limited by our national borders but, in fact, do encompass global issues.

Senator GORE. Based upon the perspective of three decades of active involvement in the scientific community, what, in your opinion, is the caliber of science currently being conducted at NOAA?

Dr. EARLE. Mr. Chairman, as an independent scientist I have been impressed with the caliber of the science as expressed through the activities of NOAA. I share with the scientific community at large the desire to, where possible, improve the caliber of research and science as expressed in NOAA, and I believe there may be some opportunities to do so.

Senator GORE. NOAA is becoming a primary player in the U.S. global change research program. What do you see as your role in that effort?

Dr. EARLE. If confirmed as Chief Scientist, I hope to be involved with looking at the matters relating to global processes and to advise the administrator and be a conduit of information both to the administrator and to the scientific community as a whole.

Senator GORE. On the scientific spectrum of opinion concerning global climate change, if one arbitrarily placed Steven Schneider at a 90 on that spectrum and Richard Lindsen as a 10 on that spectrum, where would Dr. Earle be on that spectrum?

Dr. EARLE. Mr. Chairman, I think that I have some homework to do before I could be rated, but I think my performance needs to be demonstrated before I find myself being evaluated on these fronts.

Senator GORE. I am trying to locate you ideologically, not in terms of the specific knowledge you have; but I will not press the issue because you are obviously extremely well qualified.

In the global atmosphere—after decades of concentrating on local air pollution and later examining regional air pollution, issues like acid rain which, while more controversial, nevertheless have come to stimulate a consensus of sorts. Now the world is focusing on global atmospheric issues—the increase in carbon dioxide and the increase of chlorine atoms as a result of the breakdown in the upper atmosphere by CFC's. For example, in this hearing room the air we are breathing has 600 percent more chlorine atoms in each lungful than it did 40 years ago, and the increased concentrations of chlorine in the global atmosphere are now ubiquitous on earth.

Are there changes in the composition of ocean water that are now ubiquitous, appearing across the entire ocean. If we had a sample of ocean water taken anywhere today and compared it to a similar sample taken 50 years ago which was somehow preserved and subjected to careful analysis and comparison, would we find changes equivalent to the kinds of changes in chlorine concentrations in the atmosphere that I described a moment ago? Are there ubiquitous changes of any sort in the make-up of ocean waters?

Dr. EARLE. Mr. Chairman, the answer is essentially yes. Although the processes in the oceans are somewhat slower than those in the atmosphere, both in fact are an atmosphere of sorts. That is one of the factors that makes the challenge of NOAA particularly interesting and certainly global.

Senator GORE. Are there any elements that you would cite as having increased concentrations that are now worldwide?

You can supply that for the record.

[The information referred to follows:]

As far as I am aware, there is not any one single man-made element that is ubiquitous worldwide from the top to the bottom of the ocean since mixing processes in the ocean are much slower than those in the atmosphere. However, within the ocean's surface layer there are chemical compounds that can be detected essentially worldwide. Radioactive tracers and chlorofluorocarbons fall into this category. Given the immense carrying capacity of the oceans, the fact we can detect these tracers at all is more a tribute to our parts-per-trillion chemistry than it is cause for concern. In fact, scientists use observed variations of these compounds with depth as a scientific tool—to draw inferences about ocean dynamics.

Senator GORE. I have some other questions for the record, Dr. Earle, that I hope you will be willing to respond to in writing. Senator Stevens will have some questions for the record which we would request that you respond to in writing, and other Senators on both sides will no doubt have inquiries to put to you.

We will without objection keep the hearing record open until Tuesday in order to accommodate the Senators who wish to put some questions to you.

I will advise you that I know of no opposition to your nomination. Indeed, the general feeling is the country is fortunate to have a scientist of your caliber and experience willing to serve in this position. We look forward to working with you. The formal action by the committee will take place at some point after this process is over, but there is no intent on the part of anyone to delay. Quite to the contrary, we plan to handle this in an expeditious manner.

I wish to congratulate you in advance of the formal confirmation and wish you very well in your duties at NOAA. Thank you for coming.

Dr. EARLE. Thank you, Senator.

[The following information was subsequently received for the record:]

QUESTIONS OF THE COMMITTEE AND THE ANSWERS THERETO

Question 1. NOAA collects millions of environmental observations each year from weather satellite information to data on ocean tides and currents. Yet many scientists have complained that data which they require for their research is not readily accessible to them.

How do you view the role of Chief Scientist in managing NOAA's data and making it available to researchers?

Answer. Data management and researcher access to data are the starting point for all scientific investigations. The role of the Chief Scientist is not that of actually managing NOAA's data, and making it available to researchers, but rather seeing to it that those who have that role discharge their duties faithfully and well. As a scientist, I personally believe that the ready access of NOAA data for the research community is of highest priority.

When John Knauss arrived at NOAA, he moved swiftly to deal with the data management challenge, charging the Office of the Chief Scientist with responsibility for improving NOAA's data and information management. Many early steps are already underway. Currently, the Office is examining requirements of the scientific community for data continuity and quality control to meet the needs of climatologists, and the impact and opportunities represented by anticipated advances in high-performance computing.

These actions are ongoing, and will continue to be a major responsibility for the Chief Scientist in the future.

Question 2. NOAA's research activities are conducted throughout the agency's five line offices and in research laboratories around the country.

Do you see any need to improve overall coordination and interaction among these activities?

How would you accomplish this?

Answer. NOAA is a science-based service agency. As a result, research and services are woven together throughout the agency. On the one hand, services are improved incrementally, through a "services-and-supporting-research" model, in which services set requirements of NOAA research. However, since demand for environmental services is rapidly evolving, it is also necessary to revamp the service line through a "science-and-derived-services" model. NOAA's Coastal Ocean Program and participation in the Global Change Research Program constitute excellent examples of this latter approach.

NOAA coordination and interaction in the areas of global change research, coastal ocean science, weather research, data management, and natural disaster reduction research are so strong that they have served as a model for other agencies, and as a framework for interagency approaches.

As good as the coordination is, however, it could always be better. The Office of the Chief Scientist will be working in the future to improve the integration of: ocean and atmospheric measurements in the service of climate prediction; NOAA's physical, chemical, and biological marine research; and satellite technology development and operations with the weather, ocean, climate, and solar services and products of the agency.

Senator GORE. I would like to call to the witness table now our second nominee, Paul K. Dayton. Dr. Dayton is presently at the Scripps Institution of Oceanography.

Dr. Dayton, we would like to now turn to your nomination. The Marine Mammal Commission is an independent agency established in 1972 by the Marine Mammal Protection Act. The purpose of the Commission is to develop, review, and make recommendations concerning the actions and policies of all Federal agencies which affect marine mammals.

The Commission consists of three part-time Commissioners who are required to be experts in marine ecology and carry out a diverse range of duties. The Commissioners review permit applications for marine mammal research and the capture and public display of marine mammals by zoos and commercial aquariums. They also participate in international conservation organizations such as the International Whaling Commission and the North Pacific Fur Seal Commission.

Dr. Dayton is well qualified to serve on the commission, in my opinion. He is an ecologist and marine biologist with over 20 years of experience in studying the marine environment. He is a leading expert on coastal marine habitats, and his research spans the entire Pacific from the tropics to the polar regions.

Dr. Dayton is well respected internationally and has authored numerous scholarly publications. In addition, he has served on numerous scientific advisory and review committees, including the Committee of Scientific Advisers to the Marine Mammal Commission.

At present, Dr. Dayton teaches and conducts research at Scripps Institution of Oceanography at the University of California in La Jolla, California. Born and raised in Arizona, Dr. Dayton received his undergraduate degree from the University of Arizona and his doctorate from the University of Washington.

Dr. Dayton, welcome. The committee would now be pleased to hear from you.

[The biographical sketch follows:]

ERNEST F. HOLLINGS, SOUTH CAROLINA, CHAIRMAN
DANIEL K. INOUYE, HAWAII
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United States Senate
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
WASHINGTON, DC 20510-6125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: Dayton (Last) Paul (First) Kuykendall (Other)

Address: 608 Barbara Avenue (Current residence)
Solana Beach, California 92075

Scripps Institution of Oceanography, University of California, (Business)
9500 Gilman Drive
La Jolla, California 92093-0201

2. Position to which nominated: Member, Marine Mammal Commission

Date of nomination: September 1990

3. Date of birth: April (month) 8 (day) 1941 (year)

Place of birth: Tucson, Arizona

4. Marital status: Married

Full name of Spouse: Linnea Brown Dayton

5. Names and ages of children: Gage Hart Dayton, 18
Anaika Elizabeth Dayton, 16

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
University of Arizona	1959 - 1963	B.S.	1963
University of Washington	1965 - 1970	Ph.D.	1970

Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
1982-present		Professor, Scripps Institution of Oceanography, UCSD, La Jolla, CA		
1976-1982		Associate Professor, Scripps Institution of Oceanography, UCSD		
1970-1976		Assistant Professor, Scripps Institution of Oceanography, UCSD		
1965-1970		Predoctoral Research and Teaching Assistant, University of Washington		
1963-1964		Research Technician, physiology of fishes at McMurdo Sound, Antarctica Stanford University, Stanford, CA		

8. Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.

Participant, National Academy of Science Workshop on Technology and Man-in-the-Sea, La Jolla, CA, 1979

Participant, USA-ROK Joint Advisory COmmittee on Marine Biology, Seoul-Busan, Korea, 1979

Participant, National Academy of Sciences Workshop on Applications of Ecological Theory to Applied Problems, Washington, D.C., 1979

Participant, UNOLS Workshop on Shallow-Water Submersibles, Woods Hole, MA, 1980

Member, Steering Committee of the Experimental Abalone Enhancement Program, California Department of Fish and Game and Sea Grant, 1978-1985.

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

On some election years I have made small ($10 - $25) contributions to the Democratic Party.

8. Government experience continued.....

Member, Sea Otter Scientific Advisory Committee, CDF&G, 1977-1980

Member, Advisory Board, Southern California Coastal Water Research Project, Los Angeles, CA, 1978-1984

Member, Committee of Scientific Advisors to U.S. Marine Mammal Commission, November 1976-March 1982, May 1983-December 1985; Chairman, 1980-1981, 1983-1985

Participant, Joint U.S. National Research Council-Canadian Environmental Assessment Research Council Workshop on Scientific and Management Dimensions of Cumulative Environmental Impact Assessment. Toronto, Ontario, February 5-7, 1985

NAS/NRC Ecology Panel to Review on MMS Outer Continental Shelf Environmental Studies Program

Member, Polar Research Board, National Academy of Sciences, 1989-1992

10. Memberships: List all memberships and offices held in professional, fraternal, scholarly, civic, charitable, and other organizations.

American Association for the Advancement of Science

American Society of Naturalists

Ecological Society of America

11. Honors and awards: List all scholarships, fellowships, honorary degrees, honorary society memberships, and any other special recognitions for outstanding service or achievement.

General Resident Scholarship, University of Arizona, 1959-1963

HONORS AND AWARDS:

Louise Burt Award for excellence in oceanographic writing, Oregon State Univ., 1971

George Mercer Award, Ecological Society of America, 1974

Fellow of the American Association for the Advancement of Science

12. Published writings: List the titles, publishers, and dates of books, articles, reports, or other published materials you have written.

See Attached List.

26 September 1990

John R. Twiss, Jr.
Executive Director
Marine Mammal Commission
1825 Connecticut Avenue, N.W.
Washington, D.C. 20009

Dear Mr. Twiss:

This letter sets forth the steps that I shall take pursuant to my appointment as a member of the Marine Mammal Commission, to recuse myself from involvement in particular matters of agency business that present the potential for a conflict of interest. These actions are taken in accordance with section 202 of the Ethics Reform Act of 1989, 5 U.S.C. App. § 110, and have been developed in consultation with the Commission's designated ethics official and the Office of Government Ethics.

During my tenure as a member of the Marine Mammal Commission, I shall serve on a part-time basis, as provided for in section 201(d) of the Marine Mammal Protection Act, 16 U.S.C. § 1401(d). It is therefore my intention to continue my present employment as a professor at Scripps Institution of Oceanography, University of California at San Diego. In consideration of my continuing relationship with the University, I hereby recuse myself from acting, advising, recommending, or otherwise becoming involved in any particular matter of Marine Mammal Commission business that would have a direct and predictable effect on the University of California.

While serving on the Commission, I also intend to continue to pursue research projects in certain areas of marine science. Due to my continuing interest in those areas, I further recuse myself from acting, advising, recommending, or otherwise becoming involved in any particular matter of Marine Mammal Commission business that would have a direct and predictable effect on my research or research projects that are under my supervision.

For purposes of effectuating these general commitments, my recusal agreement shall be deemed to include, but not be limited to, the following:

1. Participation in Commission deliberations on requests for research funds and applications for permits submitted by:

a. the University of California; or

b. any individual or entity wishing to do research in or obtain a permit for activities in the areas that are either of particular interest to the University of California or are in the subject areas of research conducted by me or carried out under my direction; and

2. Participation in Commission deliberations on the plans and programs of other agencies in the subject matter areas that:

a. are of particular interest to the University of California; or

b. are in the subject areas of research conducted by me or carried out under my direction.

To implement this recusal agreement the following procedures have been implemented:

1. all correspondence to me relating to Marine Mammal Protection Act permits will be reviewed by the Commission's Permit Specialist in order to identify matters that may fit within the terms of this recusal agreement;

2. all other correspondence to me will be reviewed by the Special Assistant to the Executive Director in order to identify matters that may fit within the terms of this recusal agreement; and

3. the Permit Specialist or the Special Assistant will refer all matters that potentially fit within the scope of this agreement to the Designated Agency Ethics Officer, who will determine if the recusal applies to the particular matter.

In addition, prior to entering into new employment relationships or accepting other positions, I will discuss the matter with the Commission's Designated Agency Ethics Officer to identify areas of potential conflict of interest. I understand that it may be necessary to revise this recusal agreement if new areas of potential conflict arise.

I believe that, by following these steps and abiding by this recusal agreement, I shall be in compliance with all statutory requirements involving potential conflicts of interest. I also have reviewed the Marine Mammal Commission's Employee Conduct and Responsibilities regulations and other components of the Ethics in Government Program and will comply with all applicable standards.

Sincerely,

Paul Dayton

Paul K. Dayton

STATEMENT OF DR. PAUL K. DAYTON

Dr. DAYTON. Thank you, Mr. Chairman. It is a pleasure to appear before you. You have summarized my statement, and I might paraphrase it even more briefly so we can move ahead with questions.

After graduating from the University of Arizona in 1963 with a B.S. in zoology, I spent several years as part of a Standford University research team working in the Antarctic. In the late 60's, I continued my studies at the University of Washington, where, in 1970, I received my Ph.D. in zoology.

I am pleased to be considered for appointment to the Marine Mammal Commission because my background as a marine ecologist ties in so closely with the thrust of the Marine Mammal Protection Act. As you know, the act emphasizes the health, stability, and well-being of marine ecosystems. It also attaches considerable importance to marine habitat and habitat protection. As you may have gathered from my publications, these are areas in which I have concentrated for years. I find the prospect exciting of contributing to the Commission's work in this field.

In addition to teaching and doing research, I have also tried to meet my responsibilities as a citizen scientist. In this regard, it has been my privilege to serve on a number of committees and advisory groups. Among these have been the United Academy of Sciences' Polar Research Board, the International Council of Scientific Unions' Group of Specialists on Southern Ocean Ecology, and the Marine Mammal Commission's Committee of Scientific Advisors.

I know well the demands placed upon members of the Marine Mammal Commission and the Committee of Scientific Advisors. I have made arrangements to make myself available for whatever time may be necessary should you wish me to serve. I have been careful to address any potential for conflicts of interest between my work on the Commission and my work as a professor at the University of California. With your permission, I would like to include the letter addressing this point in the record.

Thank you again for having invited me to appear before you. I shall be pleased to answer questions.

As you mentioned, I have done most of my research in the coastal zone around the Pacific. Most of my more intense research has been in the Northeastern Pacific. Throughout my career I have worked in polar areas. I have worked in the Arctic and have spent some 50 months at McMurdo Sound during my career. So I have——

Senator GORE. How many months?

Dr. DAYTON. 50.

Senator GORE. 50 months at McMurdo Sound?

Dr. DAYTON. Over 20 some odd years.

Senator GORE. They let no one stay year-round anymore, do they?

Dr. DAYTON. They sure do. It is a big program.

Senator GORE. I was down there in the austral spring or austral summer with Chairman Hollings, and I guess the number that stay through the winter is only a tiny fraction of the number in the

summer. I thought they changed the policy now and they really discourage people from staying 12 months in a row.

Dr. DAYTON. Yes, that is correct. When I wintered over in the early 1960's, 1963, I spent 15 months. I must admit that was a little long. There are programs now in which people do winter over and approach the 12 months, I think, but mostly they cycle them in and out so they do not get stale.

At any rate, I bring to the Marine Mammal Commission appointment a fair amount of experience in polar areas as well as my coastal research.

I am really pleased to be considered for appointment to the Commission. As you know, the Marine Mammal Production Act emphasizes the health, stability, and well-being of the habitat as a whole, and I think this is where I could make my strongest contribution.

As you also mentioned, I have spent a fair amount of time doing public service with National Academy of Sciences workshops, committees, panels, and this and that. In addition, I have had many interactions on foreign and international panels and working groups. So I bring some international perspective to the Commission's role which I think could be useful as well.

Almost 6 years of experience on the Committee of Scientific Advisors gives me some understanding of the time commitment the Commissioners are expected to make, and I admit to being a little bit nervous about that. However, I pledge to do my very best to meet all of the commitments.

I will maintain my position as a professor at Scripps Institution of Oceanography at the University of California. I have made arrangements to recuse myself from any potential conflicts. I am very concerned about ethics and science, and my recusal letter should be on record so that you can review it.

I thank you very much for inviting me today, and I would be happy to respond to any of your questions.

Senator GORE. Very good.

We have had two really good nominees here today. I congratulate you on your experience and what will be your confirmation.

I was curious about some things. Why is the penguin population increasing in Antarctica?

Dr. DAYTON. The penguin population is very difficult to census. There are some places where I think we can say with certain confidence that it is in fact increasing, and it is probably increasing due to the increased kill resulting from decreased predation by the great whales.

Senator GORE. The whale population is going down, so the penguin population goes up?

Dr. DAYTON. Yes. That is the going hypothesis.

Let me point out, however, that many of these penguin data, especially in the far south as opposed to South Georgia, are tied into ice conditions, and the ice conditions are tied to bigger oceanographic and climatological patterns.

Over the 30 to 35 years that people have been working down there, we have seen significant changes in the ice, and it is not necessarily related to global warming. It is El Nino effects, perhaps, and the penguins I think are probably following the ice conditions and their winter feeding conditions as much as anything else.

So it is a little risky to speculate that this and that is a direct result or a cause of the penguin population changes.

Senator GORE. No. I was just curious. I was not pointing toward anything. I just had been talking to someone who was telling the story about the predator population going down and how in many areas that created an explosion.

Where do the Emperors go in the winter?

Dr. DAYTON. The Emperors spend the winter on the ice. That is when they lay their eggs and hatch the chicks, in the middle of the winter. They usually will live on fast ice near polynyas, openings or leads in the ice, so that they can feed during the winter when most of the sea is completely frozen over.

Their populations are also in flux because the ice conditions change. There may be a big colony at Cape Crozier one year and then 5 years later it will move somewhere else. This may cause a big hue and cry about environmental degradation, which is probably not really involved in this particular case at all.

Senator GORE. All right.

When established in 1972, the primary responsibility of the Marine Mammal Commission was to review existing and proposed programs affecting marine mammals and to suggest changes. Since then, the Departments of Commerce and Interior have had 15 years to initiate and develop marine mammal programs.

Has the continued development of Federal marine mammal programs obviated the need for a separate commission?

Dr. DAYTON. No, I sincerely believe not, although I do not want to at this point criticize the agencies. I think that some of the most serious problems we face in ocean health and well-being are, for example, overfishing and some of the spinoffs of the fishing industry, especially gill nets, ghost fishing, and fishing-related debris, in the ocean.

To more explicitly answer your question, an independent agency such as this is very useful in keeping focus on the big picture when other agencies are responding to political pressures and immediate problems.

So I would be very anxious to maintain the Commission's role.

Senator GORE. In 1988 the harbor seal plague killed over 17,000 seals in Europe and Scandinavia. Canadian researchers recently postulated that global warming may have been one cause of the epidemic by creating unusually warm temperatures and high population densities which allow the disease to spread more rapidly.

What do you think of their hypothesis, and are there other potential effects of global warming on marine populations?

Dr. DAYTON. There are two questions there. The North Atlantic fur seal population die-off is one issue. Again, I am more of an ecologist than a veterinarian, but as I understand that problem it was a distemper-like virus that was the proximal cause. Because viruses and bacteria in general can affect populations that have been stressed, viruses tend to show up when the individuals are weak. To understand the problem, one looks beyond the virus.

Whether it is global warming or not is hard to say. There are all sorts of things that could stress these animals to the point where they come down with diseases.

I might point out, though, that there is a long history of die-offs in the North Sea. Even as long ago as the Domesday Book which was commissioned by William the Conqueror, there were records of massive seal die-offs in that area. All through the Middle Ages you find people remarking on all of the dead seals on the beaches. So like all other ecological issues, that one is complicated, and I would hate to point to global warming.

However, let me not back down from the global warming question. I think that it is the gravest environmental problem in the world today, and I hope we can deal with it constructively.

So far as the global warming affects marine mammals, there is some evidence which I tend to go along with, that the sea ice both in the north and the south is thinning. Right now it looks the same in the satellite photographs. Although these show the sea ice to be the same, there are data that show that, for example, in parts of the Antarctic the ice has gone from 1.5 meters to .5 meters, and as soon as you have bigger polynyas, the albedo will change.

I would expect——

Senator GORE. Let me add for the record that polynyas are the openings between the ice; correct?

Dr. DAYTON. Yes. Open water within the ice.

Senator GORE. The albedo is the reflectivity of the surface.

So what you are saying in plain English is that when the cracks in the ice get bigger and more of the surface is ocean water and less is the shiny ice, more of the sunlight is absorbed and less is reflected.

Dr. DAYTON. It is a self-accelerating problem. Once this problem develops, I think it will then progress very quickly.

Now the ice in both polar areas is an extremely important habitat for many marine mammals, and so if we are looking for a marine mammal/global warming problem, there is a connection there that I would go to the wall for.

Senator GORE. I was just under the North Polar ice cap with the Navy and completed a 6-month negotiation to release the sonar data that has been compiled over 30 years on the ice thickness. It is being scrubbed and examined by a team of scientists now.

Dr. DAYTON. Do they agree with the British argument?

Senator GORE. It is too early to tell. We will have to see what they say in the data record.

Are you familiar with the recent starfish die-off, millions in the White Sea?

Dr. DAYTON. Starfish?

Senator GORE. Yes.

Dr. DAYTON. I am unfamiliar with the White Sea starfish.

Senator GORE. This was just within the last 6 weeks. They were reportedly, according to Alexei Yablokov, up to the middle of the thighs of people walking along the beaches of the White Sea. They had never had anything like that.

Dr. DAYTON. I would argue that that might be a harbinger of global warming because the White Sea has a salinity problem. It is a very low salinity sea bordering on being fresh water, and so it would not take very much of additional runoff from the Soviet Arctic to change the salinity.

Starfish are notoriously poor at salinity regulation, so I could argue that that might be a result of warming.

Senator GORE. Well, if you have any further thoughts on that particular one I would like to hear them. The Soviet Academy is really puzzled by this one right now, I am told. The Gulf Stream sort of curls around there and ends up in the White Sea, does it not?

Dr. DAYTON. That is right. Yes.

Senator GORE. I have a lot of other questions for the record, as do my colleagues. We have a hearing that is on a related question. We are going to examine in depth in just a few moments here the relationship between global warming and the death of coral reefs and look at the evidence that has been compiled on that.

If you would be willing to respond in writing, I know my colleagues will have other questions as well. We will hold the hearing record open until Tuesday without objection.

Senator GORE. There is no controversy on your nomination of which I am aware. As I said to our previous nominee, I think the country is fortunate that you are willing to serve.

I really am delighted to see such qualified people as these two nominees this morning coming into government service.

I really look forward to working with you, Dr. Dayton. Thank you for coming today.

Dr. DAYTON. Thank you very much.

Senator GORE. With that, our nomination hearing will stand adjourned.

[Whereupon, at 9:35 a.m., the hearing was adjourned.]

[The following information was subsequently received for the record:]

Questions from Members of the Committee
and
Responses of
Paul K. Dayton, Ph.D.
Marine Mammal Commission Nominee

QUESTION:

In 1988, the Committee completed a 5-year reauthorization of the Marine Mammal Protection Act. However, a number of new issues have been raised in recent months, including the need for legislation setting standards for "dolphin-safe" tuna products.

-- How well has the MMPA worked over the past 15 years? How would you compare the present status of marine mammal populations with their status in 1972?

-- What changes in the MMPA would you suggest to improve marine mammal conservation or management?

-- At a recent hearing, opinion was divided on the effectiveness of tuna-labeling requirements for improving dolphin protection - what are your views?

RESPONSE:

Effectiveness of the Marine Mammal Protection Act

I think that the Act has worked extremely well. One reason is that it provides for the Marine Mammal Commission. In my view, the Commission has made major contributions on many important issues. It has been particularly effective at convening working groups to identify problems, organize relevant scientific background information, and describe possible solutions. In this way, the Commission has helped regulatory agencies better handle issues relating to: the capture, holding, and humane treatment of marine mammals; improving the permit process; developing better U.S. positions within the International Whaling Commission; identifying the threat posed by oceanic plastic debris and developing strategies and tactics to reduce this threat; investigating causes of marine mammal strandings and unusual mortality; analyzing the implications of offshore oil and gas development; etc.

In many cases, the Commission has identified extremely important issues and has been the moving force in addressing those issues. One example is the development of statistically reliable methods for censusing marine mammals like dolphins, several species of whales, and seals. The Commission early recognized the importance of this. Through many contracts and

workshops, it encouraged the scientific community to grapple with these important, difficult problems to come up with better approaches. Another important activity of the Commission has been to better define the U.S. role, with respect to wildlife, in polar habitats. The Commission has assumed leadership roles in a variety of treaty negotiations addressing marine mammal-fishery interactions, incidental take, fur seals, and Antarctic conservation.

The Commission's annual report has appendices which list technical reports and publications resulting from research sponsored by the Commission. The authors are a "Who's Who" of marine conservation. Yet these papers are only a small part of the Commission's legacy -- many reports published by other agencies emerged only because of the strong pressure and financial support from the Commission. A good example was the National Academy of Science's report on Antarctic research which was used to help the National Science Foundation meet its Antarctic responsibilities. Several other Antarctic projects were organized by NOAA as a result of Commission recommendations.

Status of Marine Mammals

Some species and populations of marine mammals have increased substantially as a result of the protection provided by the Marine Mammal Protection Act. Harbor seal, California sea lion, and elephant seal populations have increased throughout their ranges in the coastal waters of the continental United States. Furthermore, there have been successful efforts to begin rebuilding populations of the endangered Hawaiian monk seal.

At the same time, however, some populations have declined and/or remain in danger of extinction. The Steller sea lion, for example, has declined to the point where it had to be listed, on an emergency basis, as "threatened" under the Endangered Species Act. Also, while there have been significant efforts, there has been little success in reducing human-caused mortality of "endangered" manatees in Florida. The Florida manatee populations remain in serious danger of extinction.

Changes in the Act

There are three areas in which the Marine Mammal Protection Act might be improved -- marine mammal/fishery interactions, facilitating the investigation of unusual marine mammal mortalities, and the issuance of permits for scientific research.

With respect to marine mammal/fishery interactions, Congress has recognized this problem. In 1988, it directed the National Marine Fisheries Service, in consultation with the Commission and other relevant groups, to develop and provide to Congress by 1

January 1992, a recommended system for assessing, minimizing, and authorizing the incidental take of marine mammals in the course of commercial fishing operations. Earlier this year, the Commission gave recommended guidelines to the National Marine Fisheries Service. The Service will use these to develop, in consultation with the Fish and Wildlife Service, fisheries groups, environmental groups, and the Commission, a recommended package for Congressional consideration.

There have been a number of unusual marine mammal mortalities in the U.S. and elsewhere in recent years. For example, more than 700 bottlenose dolphins died and washed up on beaches along the mid- and south-Atlantic states in the last half of 1987 and early 1988. In 1988, more than 16,000 harbor seals died in the North Sea from a previously unknown virus that caused symptoms similar to canine distemper. With support from the Marine Mammal Commission, U.S. scientists are, at this moment, investigating a die-off of striped dolphins in the western Mediterranean to see if, among other things, there may be some common thread to die-offs which might help us in addressing these phenomena here in the U.S. Investigating such mortalities has been hindered because neither contingency plans nor contingency funds exist to support such studies. If the Act were amended to establish a contingency fund and to direct the development of contingency plans, much would be accomplished. A part of such an amendment might also be a directive to the National Marine Fisheries Service, the Fish and Wildlife Service, and the Environmental Protection Agency to undertake a study to determine the types and levels of contaminants present in marine mammals that occur in U.S. coastal waters. Such a baseline study could be instrumental in the design and implementation of a long-term program for monitoring the sources, levels, fates, and effects of environmental contaminants present in selected "indicator" species of marine mammals.

It might also be desirable to amend the Act to allow the National Marine Fisheries Service and the Fish and Wildlife Service, in consultation with the Commission, to issue scientific research permits, before the end of the 30-day public review period, when unique research opportunities might be lost if the research cannot be authorized immediately. I recognize that such an emergency provision could be abused, but believe that the advantages would be greater than the disadvantages. We would be better able, for example, to immediately start the necessary research in such crises as that precipitated by the Exxon Valdez oil spill.

Tuna Labeling

The proposed tuna-labeling legislation assumes that: (a) the majority of the American public would choose not to buy tuna caught using methods that may kill or injure dolphins; and (b) if the majority of U.S. consumers refuse to buy tuna caught using

methods that kill or injure dolphins, fishermen will switch to alternative fishing methods. These assumptions are based, in turn, upon other assumptions -- e.g., that the U.S. and other like-minded countries represent the majority of the U.S. tuna market, that both U.S. and foreign tuna purse seine fleets that catch tuna by "setting on dolphin" are dependent on markets in the United States and other like-minded countries, that alternative markets do not exist and cannot be developed, and that a cost-effective alternative for catching the large yellowfin tuna that occur in the eastern tropical Pacific either exists or can be developed.

If any of the assumptions are not valid, the proposed legislation could result in an increase, rather than a decrease, in dolphin mortality. In this regard, it is important to note that the major U.S. processors have voluntarily agreed not to sell tuna caught by "setting on dolphins" and are buying tuna caught in places where dolphin and tuna apparently do not associate. There has been no effort, so far as the Commission is aware, to develop alternative methods for catching large yellowfin tuna in the eastern tropical Pacific where most tuna presently is caught by "setting on dolphin." At the same time, the U.S. fleet operating in the eastern tropical pacific has declined to fewer than 10 boats, and Mexico, the country with the largest purse seine fleet presently fishing in the eastern tropical Pacific, has been embargoed from exporting tuna to the United States. Consequently, it seems to me that several of the assumptions upon which the tuna-labeling legislation is based may be faulty and that the legislation could be a disincentive, rather than an incentive, to develop and use dolphin-safe fishing technology.

QUESTION:

Fishery-marine mammal conflicts continue to be a major problem in both Atlantic and Pacific coastal areas. The use of large driftnets, in particular, appears to represent a real threat to marine mammal populations.

-- As an expert in marine ecology, how would you assess the seriousness of this problem?

-- As Marine Mammal Commissioner, what recommendations would you make to deal with the situation?

RESPONSE:

Driftnets pose a serious threat to a number of species, including, but not limited to, marine mammals. Sea birds, turtles, and a variety of non-target fish species are being taken incidentally in these fisheries. Furthermore, the catches are so large in some fisheries that even the target species itself may

be at risk. We do not know a great deal about the functional roles of some of the target and by-catch species in the marine food web, and it is possible, many would say likely, that catches are having significant direct, as well as indirect, effects.

As a Marine Mammal Commissioner, I would support and foster the Commission's continuing efforts to keep this issue at the fore and to force constructive action. Specifically, I would use the weight of the Commission to encourage the U.S. to work within the United Nations to achieve, at a minimum, at least a temporary ban on the use of large driftnets. Second, I would try to make the United States do more, through cooperative fisheries agreements, to: (a) obtain statistically reliable estimates of the quantities of both target and by-catch species being taken in the Japanese, Taiwanese, and South Korean driftnet fisheries in the North Pacific; and (b) identify and evaluate possible ways for avoiding or reducing the incidental take of marine mammals, sea birds, and other non-target species. Third, I think that the Department of State, in consultation with the Commission, the National Marine Fisheries Service, the Coast Guard, and other relevant agencies, should constitute an interagency working group to review and make recommendations on further actions needed to ban or otherwise insure that driftnet fisheries do not have unacceptable impacts.

QUESTION:

In 1972, less than $200,000 was spent on research and management programs for marine mammals within the Interior and Commerce Departments. Since that time, however, spending on marine mammal programs has greatly increased. In 1990, the budget for protected species in the Commerce Department alone exceeded $8 million. Although this program covers other protected species as well, the largest part is directed towards marine mammal research and management.

-- Are these funds being effectively allocated towards current research and management needs? Please explain.

-- What are the strengths and weaknesses of current marine mammal research and management programs?

RESPONSE:

The Marine Mammal Protection Act directs the Commission to conduct a continuing review of marine mammal research programs conducted under the authority of the Act. As part of this review, the Commission annually surveys and publishes a summary of Federally-funded marine mammal research. The most recent summary (copy attached) and consultations with colleagues lead me to believe that available funding is being used with reasonable effectiveness. However, improvements could be made. For

example, not enough attention is being paid to determining the effects of environmental contaminants on marine mammals and evaluating the possibility that certain marine mammals may be useful indicators of the status of the health of marine ecosystems. I also am concerned that adequate resources are not being devoted to protection and recovery of endangered sea mammals, like manatees in Florida and right and humpback whales, that occur primarily in U.S. waters.

I share many of the uncertainties which prompted your questions. To address these concerns over the next year, I intend to ensure that the major marine mammal research and management programs of the National Marine Fisheries Service and the Fish and Wildlife Service are critically reviewed by the Commission in consultation with its Committee of Scientific Advisors.

STATEMENT OF SENATOR PETE WILSON

ON THE CONFIRMATIONS OF

SYLVIA A. EARLE AND PAUL K. DAYTON

Mr. Chairman, it is a pleasure for me to introduce Sylvia A. Earle and Paul K. Dayton today in their confirmation hearings before the Senate Committee on Commerce, Science, and Transportation.

The Administration has recommended Dr. Earle for the position of Chief Scientist at the National Oceanic and Atmospheric Administration (NOAA) and Mr. Dayton to be a member of the Marine Mammal Commission. I am pleased to offer my support for both nominations.

Dr. Earle has an impressive list of credentials attesting to her ability to serve as NOAA's Chief Scientist. Since 1981, Sylvia has served as Founder, Director, and Chief Executive Officer of Deep Ocean Technology, Inc. in San Leandro, California. In addition to other private sector work, Dr. Earle has served as Fellow, Research Biologist, and Curator at the California Academy of Sciences since 1979, and also has done research work at the University of California, Berkeley, and Harvard University. I am pleased with Dr. Earle's membership on the Environmental Protection Agency's National Advisory Committee on Environmental Technology Policy. A bevy of awards testify to the respect she has garnered in the field of oceanography.

Paul Dayton also has solid credentials. A respected scientist and professor at the Scripps Institute of Oceanography since 1982, Paul has a great number of marine-ecology publications to his credit. He has previously served the Marine Mammal Commission as a scientific advisor, most recently as Chairman of the Committee of Scientific Advisors.

My home state of California has off its coast some of the richest marine life and habitats anywhere. However, these coastal areas and others are threatened by industrial pollution and offshore drilling. I have grave concerns for the future of those waters which California's tourists and locals have long enjoyed for recreational and scenic purposes. Maintaining a healthy and proper ecological balance in the oceans also is vital to the fishing industry and hence to the California economy.

Dr. Earle and Mr. Dayton possess the scientific skills and experience necessary for the positions for which they have been nominated. I move the nominations of Sylvia A. Earle as Chief Scientist of NOAA and Paul K. Dayton as member of the Marine Mammal Commission and recommend that they be favorably and promptly reported to the full Senate for confirmation.

Thank you, Mr. Chairman.

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